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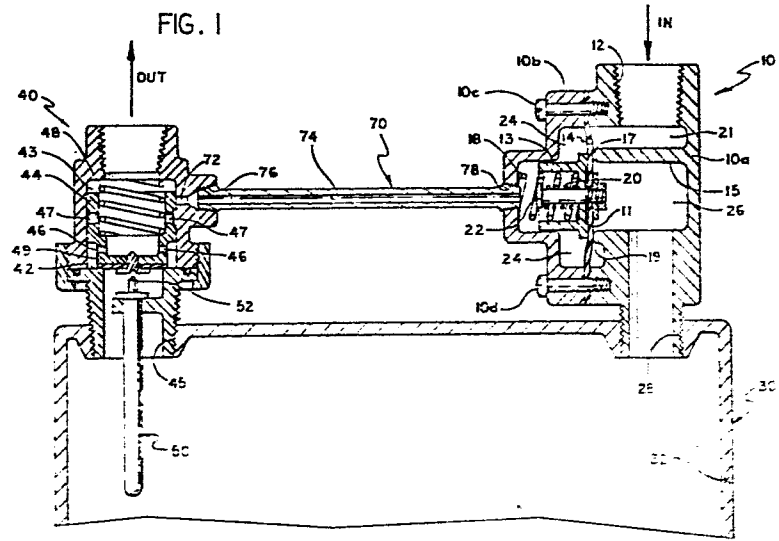
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(54) **Improved automatic control system for water heaters.**

(57) A system for isolating a pressurized water source from a pressurized hot water tank when a leak or rupture occurs to the tank. The system includes a connecting line (70) attached between a check valve (40) and a control valve (16) with a diaphragm attached to the control valve body to sense the pressure differential between the water source and the connecting line (70). Upon a leak or a rupture occurring, the diaphragm completely closes the control valve. The check valve (40) does not allow the hot water from the water heater tank to enter the domestic system when a leak or rupture occurs. The system further allowing cold water to enter the tank when a predetermined temperature is reached or exceeded. The system further allowing for make up of water volume loss in the tank during a cooling cycle.

FIG. 1





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
X,D	US-A-3 754 563 (BOALS) * Whole document *	1-3	F 24 H 9/20
A	--- US-A-2 283 513 (SMITH) * Whole document *	1-4, 8, 9	
A	--- DE-A-2 043 094 (AUTOMATIC SWITCH CO.) * Figures; claim 1 *	4	

The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
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Place of search THE HAGUE		Date of completion of the search 15-04-1987	Examiner VAN GESTEL H.M.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	